AMENDMENTS TO THE CLAIMS

1. (Previously Presented) A method for creating and recording search information for recorded digital data streams, comprising the steps of:

recording a received digital data stream by grouping the received digital data stream into stream object units, with each stream object unit having a predetermined length;

creating and recording time information for said each stream object unit, the time information being used to search for said stream object units; and

creating and recording an index number of a first stream object unit of each stream object for pointing to the start position of each stream object.

2. (Previously Presented) The method set forth in claim 1, wherein said time information is the length of each stream object unit, expressed in terms of a count value counted at a constant interval.

3. (Previously Presented) The method set forth in claim 2, wherein said count value is a number incremented by 1 for each successive constant interval.

4. (Previously Presented) The method set forth in claim 1, wherein said index number is in the order of said time information of a time information entry related to each stream object.

5. (Previously Presented) The method set forth in claim 4, wherein said index number is in the order of said time information of a time information entry corresponding to the first stream object unit of each stream object.

6. (Previously Presented) A method for creating and recording search information for recorded digital data streams, comprising the steps of:

recording time information on the count value counted at a constant interval for each stream object unit, with each stream object unit consisting of transport streams; and

recording an index number of a first stream object unit of each stream object for pointing to the start position of each stream object.

7. (Previously Presented) The method set forth in claim 6, wherein said count value is a number incremented by 1 for each successive constant interval for a stream object unit.

8. (Previously Presented) The method set forth in claim 6, wherein said index number is in the order of said time information of a time information entry related to each stream object.

9. (Previously Presented) The method set forth in claim 8, wherein said index number is in the order of said time information of a time information entry corresponding to the first stream object unit of each stream object.

10. (Previously Presented) A method for searching recorded digital data streams, comprising the steps of:

(a) reading search time information for stream object units, each stream object unit consisting of a plurality of digital transport streams and the search time information being the length of each stream object unit, expressed in terms of a count value counted at a constant interval;

(b) detecting a stream object containing a requested search time by comparing the requested search time with start time information of each stream object consisting of a predetermined number of stream object units, the start time information having been recorded for accessing the stream objects;

(c) reading an index number of a first stream object unit of each stream object pointing to the start position of each stream object; and

(d) accessing a time information entry corresponding to said read index number.

11. (Previously Presented) The method set forth in claim 10, further comprising the step (e) of accumulating search time from the accessed time information entry to a time information entry corresponding to the stream object unit containing the requested search time.

12. (Previously Presented) The method set forth in claim 11, wherein said step (e) compares the accumulated search time with the requested search time and determines the position corresponding to the requested search time based upon the comparison result.

13. (Previously Presented) The method set forth in claim 12, further comprising the step (f) of reproducing the recorded digital data stream from the determined position.

14. (Previously Presented) The method set forth in claim 10, wherein said index number is in the order of said search time information of a first time information entry corresponding to the detected stream object.

15. (Previously Presented) An apparatus for creating and recording search information for recorded digital data streams, comprising:

recording means for recording a received digital data stream by grouping the received digital data stream into stream object units and for creating and recording time information for each stream object unit for searching for the recorded stream object units, with each stream object unit having a predetermined length; and

control means for creating an index number of a first stream object unit of each stream object for pointing to the start position of each stream object and controlling said recording means to record said index number.

16. (Previously Presented) The apparatus set forth in claim 15, wherein said time information is the length of each stream object unit, expressed in terms of a count value counted at a constant interval.

17. (Previously Presented) The apparatus set forth in claim 15, wherein said index number is in the order of said time information of a time information entry corresponding to the first stream object unit of each stream object.

18. (Previously Presented) An apparatus for reproducing recorded digital data streams, comprising:

reading means for reading search time information for stream object units, each stream object unit consisting of a plurality of digital transport streams and the search time information being the length of each stream object unit expressed in terms of a count value counted at a constant interval; and

control means for detecting a stream object containing a requested search time by comparing the requested search time with start time of each stream object consisting of one or more stream object units, and controlling said reading means to read an index number of a first stream object unit of each stream object pointing to the start position of each stream object, and moving the data reproducing position of said reading means to access a time information entry corresponding to said read index number, wherein information on the start time of each stream object has been recorded for accessing stream objects.

19. (Previously Presented) An apparatus for creating and recording search information for recorded digital data streams, comprising:

a data formatter to group a received digital data stream into stream object units and to create time information for each stream object unit for searching for the stream object units individually, wherein each stream object unit has a predetermined length;

a data recorder to record the digital data stream grouped by and the time information created by said data formatter; and

a controller to create an index number of a first stream object unit of each stream object for pointing to the start position of each stream object, and to control said data recorder to record the created index number.

20. (Previously Presented) An apparatus for reproducing recorded digital data streams, comprising:

a pickup to read recorded stream object units and search time information for the stream object units, each stream object unit consisting of a plurality of digital transport streams and the search time information being the length of each stream object unit expressed in terms of a count value counted at a constant interval;

a data analyzer to detect a stream object read by said pickup containing a requested search time by comparing the requested search time with start time of each stream object consisting of one or more stream object units; and

a controller to control said pickup to read an index number of a first stream object unit of each stream object read by said pickup pointing to the start position of each stream object, the first stream object unit of each stream object read by said pickup being for the start position of the stream object detected by said data analyzer, and to move the data reproducing position of

said pickup to access a time information entry corresponding to the index number read by said pickup, wherein information on the start time of each stream object has been recorded for accessing stream objects.

21. (Previously Presented) The method of claim 1, wherein a size of the index number is one (1) byte.

22. (Previously Presented) The apparatus of claim 15, wherein a size of the index number is one (1) byte.

23. (New) The method of claim 1, wherein the index number is a number assigned to a starting stream object unit of each stream object.

24. (New) The method of claim 6, wherein the index number is a number assigned to a starting stream object unit of each stream object.

25. (New) The method of claim 10, wherein the index number is a number assigned to a starting stream object unit of each stream object.

26. (New) The apparatus of claim 15, wherein the index number is a number assigned to a starting stream object unit of each stream object.

27. (New) The apparatus of claim 18, wherein the index number is a number assigned to a starting stream object unit of each stream object.

28. (New) The apparatus of claim 19, wherein the index number is a number assigned to a starting stream object unit of each stream object.

29. (New) The apparatus of claim 20, wherein the index number is a number assigned to a starting stream object unit of each stream object.